

SEQUENCE LISTING

<110> Intellectual Property Consulting, Inc.

TOHYAMA, Masaya

YAMASHITA, Toshihide

TANAKA, Hiroyuki

HIGUCHI, Haruhisa

<120> COMPOSITION AND METHOD FOR NERVE REGENERATION

<130> TR010PCT

<140> not yet assigned

<141> not yet assigned

<150> JP 2003-92923

<151> 2003-3-28

<150> JP 2003-125681

<151> 2003-4-30

<150> JP 2003-284559

<151> 2003-7-31

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<170> PatentIn version 3.1

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<213> Homo sapiens

<400> 4

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Pro Thr Gly Leu Tyr Thr His Ser Gly Glu Cys Cys Lys Ala Cys Asn
35 40 45

Leu Gly Glu Gly Val Ala Gln Pro Cys Gly Ala Asn Gln Thr Val Cys
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Glu Pro Cys Leu Asp Ser Val Thr Phe Ser Asp Val Val Ser Ala Thr
65 70 75 80

Glu Pro Cys Lys Pro Cys Thr Glu Cys Val Gly Leu Gln Ser Met Ser
85 90 95

Ala Pro Cys Val Glu Ala Asp Asp Ala Val Cys Arg Cys Ala Tyr Gly
100 105 110

Tyr Tyr Gln Asp Glu Thr Thr Gly Arg Cys Glu Ala Cys Arg Val Cys
115 120 125

Glu Ala Gly Ser Gly Leu Val Phe Ser Cys Gln Asp Lys Gln Asn Thr
130 135 140

Val Cys Glu Glu Cys Pro Asp Gly Thr Tyr Ser Asp Glu Ala Asn His
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Val Asp Pro Cys Leu Pro Cys Thr Val Cys Glu Asp Thr Glu Arg Gin
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Leu Arg Glu Cys Thr Arg Trp Ala Asp Ala Glu Cys Glu Glu Ile Pro
180 185 190

Gly Arg Trp Ile Thr Arg Ser Thr Pro Pro Glu Gly Ser Asp Ser Thr
195 200 205

Ala Pro Ser Thr Gin Glu Pro Glu Ala Pro Pro Glu Gin Asp Leu Ile
210 215 220

Ala Ser Thr Val Ala Gly Val Val Thr Thr Val Met Gly Ser Ser Gin
225 230 235 240

Pro Val Val Thr Arg Gly Thr Thr Asp Asn Leu Ile Pro Val Tyr Cys
245 250 255

Ser Ile Leu Ala Ala Val Val Val Gly Leu Val Ala Tyr Ile Ala Phe
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Lys Arg Trp Asn Ser Cys Lys Gin Asn Lys Gin Gly Ala Asn Ser Arg
275 280 285

Pro Val Asn Gin Thr Pro Pro Pro Glu Gly Glu Lys Leu His Ser Asp
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Ser Gly Ile Ser Val Asp Ser Gln Ser Leu His Asp Gln Gln Pro His
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Thr Gln Thr Ala Ser Gly Gln Ala Leu Lys Gly Asp Gly Gly Leu Tyr
325 330 335

Ser Ser Leu Pro Pro Ala Lys Arg Glu Glu Val Glu Lys Leu Leu Asn
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Gly Ser Ala Gly Asp Thr Trp Arg His Leu Ala Gly Glu Leu Gly Tyr
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Gln Pro Glu His Ile Asp Ser Phe Thr His Glu Ala Cys Pro Val Arg
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<212> DNA

<213> Homo sapiens

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35 40 45

Arg Lys Tyr Lys Glu Ala Leu Leu Gly Arg Val Ala Val Ser Ala Asp
50 55 60

Pro Asn Val Pro Asn Val Val Val Thr Gly Leu Thr Leu Val Cys Ser
65 70 75 80

Ser Ala Pro Gly Pro Leu Glu Leu Asp Leu Thr Gly Asp Leu Glu Ser
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Phe Lys Lys Gln Ser Phe Val Leu Lys Glu Gly Val Glu Tyr Arg Ile
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Lys Ile Ser Phe Arg Val Asn Arg Glu Ile Val Ser Gly Met Lys Tyr
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Ile Gin His Thr Tyr Arg Lys Gly Val Lys Ile Asp Lys Thr Asp Tyr
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Pro Val Glu Glu Ala Pro Lys Gly Met Leu Ala Arg Gly Ser Tyr Ser
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Ile Lys Ser Arg Phe Thr Asp Asp Lys Thr Asp His Leu Ser Trp
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Glu Trp Asn Leu Thr Ile Lys Lys Asp Trp Lys Asp
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<211> 2475

<212> DNA

<213> Rattus norvegicus

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<212> PRT

<213> Rattus norvegicus

<400> 8

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35 40 45

Glu Leu Arg Pro Ala Val Val His Gly Val Trp Tyr Phe Asn Ser Pro
50 55 60

Tyr Pro Lys Asn Tyr Pro Pro Val Val Phe Lys Ser Arg Thr Gln Val
65 70 75 80

Val His Glu Ser Phe Gln Gly Arg Ser Arg Leu Leu Gly Asp Leu Gly
85 90 95

Leu Arg Asn Cys Thr Leu Leu Leu Ser Thr Leu Ser Pro Glu Leu Gly
100 105 110

Gly Lys Tyr Tyr Phe Arg Gly Asp Leu Gly Gly Tyr Asn Gln Tyr Thr

115 120 125

Phe Ser Glu His Ser Val Leu Asp Ile Ile Asn Thr Pro Asn Ile Val

130 135 140

Val Pro Pro Glu Val Val Ala Gly Thr Glu Val Glu Val Ser Cys Met

145 150 155 160

Val Pro Asp Asn Cys Pro Glu Leu Arg Pro Glu Leu Ser Trp Leu Gly

165 170 175

His Glu Gly Leu Gly Glu Pro Thr Val Leu Gly Arg Leu Arg Glu Asp

180 185 190

Glu Gly Thr Trp Val Gln Val Ser Leu Leu His Phe Val Pro Thr Arg

195 200 205

Glu Ala Asn Gly His Arg Leu Gly Cys Gln Ala Ala Phe Pro Asn Thr

210 215 220

Thr Leu Gln Phe Glu Gly Tyr Ala Ser Leu Asp Val Lys Tyr Pro Pro

225 230 235 240

Val Ile Val Glu Met Asn Ser Ser Val Glu Ala Ile Glu Gly Ser His

245 250 255

Val Ser Leu Leu Cys Gly Ala Asp Ser Asn Pro Pro Pro Pro Leu Leu Thr
260 265 270

Trp Met Arg Asp Gly Met Val Leu Arg Glu Ala Val Ala Glu Ser Leu
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Tyr Leu Asp Leu Glu Glu Val Thr Pro Ala Glu Asp Gly Ile Tyr Ala
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Cys Leu Ala Glu Asn Ala Tyr Gly Gln Asp Asn Arg Thr Val Glu Leu
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Pro Asp Pro Ile Leu Thr Ile Phe Lys Glu Lys Gln Ile Leu Ala Thr
355 360 365

Val Ile Tyr Glu Ser Gln Leu Gln Leu Glu Leu Pro Ala Val Thr Pro
370 375 380

Glu Asp Asp Gly Glu Tyr Trp Cys Val Ala Glu Asn Gln Tyr Gly Gln
385 390 395 400

Arg Ala Thr Ala Phe Asn Leu Ser Val Glu Phe Ala Pro Ile Ile Leu

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415

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420

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430

Val Val Lys Ser Asn Pro Glu Pro Ser Val Ala Phe Glu Leu Pro Ser

435

440

445

Arg Asn Val Thr Val Asn Glu Thr Glu Arg Glu Phe Val Tyr Ser Glu

450

455

460

Arg Ser Gly Leu Leu Leu Thr Ser Ile Leu Thr Leu Arg Gly Gin Ala

465

470

475

480

Gin Ala Pro Pro Arg Val Ile Cys Thr Ser Arg Asn Leu Tyr Gly Thr

485

490

495

Gin Ser Leu Glu Leu Pro Phe Gin Gly Ala His Arg Leu Met Trp Ala

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505

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Lys Ile Gly Pro Val Gly Ala Val Val Ala Phe Ala Ile Leu Ile Ala

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580 585 590

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Val Lys
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<212> DNA
<213> *Mus musculus*

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<211> 1162

<212> PRT

<213> *Mus musculus*

<400> 10

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Pro Pro Arg Pro Pro Pro Ala Phe Lys Tyr Gln Phe Val Thr Glu Pro

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30

Glu Asp Glu Glu Asp Glu Glu Asp Glu Glu Glu Glu Asp Asp Glu

35

40

45

Asp Leu Glu Glu Leu Glu Val Leu Glu Arg Lys Pro Ala Ala Gly Leu

50

55

60

Ser Ala Ala Pro Val Pro Pro Ala Ala Ala Pro Leu Leu Asp Phe Ser

65

70

75

80

Ser Asp Ser Val Pro Pro Ala Pro Arg Gly Pro Leu Pro Ala Ala Pro

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Pro Thr Ala Pro Glu Arg Gln Pro Ser Trp Glu Arg Ser Pro Ala Ala

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Ser Ala Pro Ser Leu Pro Pro Ala Ala Ala Val Leu Pro Ser Lys Leu

115 120 125

Pro Glu Asp Asp Glu Pro Pro Ala Arg Pro Pro Ala Pro Ala Gly Ala

130 135 140

Ser Pro Leu Ala Glu Pro Ala Ala Pro Pro Ser Thr Pro Ala Ala Pro

145 150 155 160

Lys Arg Arg Gly Ser Gly Ser Val Asp Glu Thr Leu Phe Ala Leu Pro

165 170 175

Ala Ala Ser Glu Pro Val Ile Pro Ser Ser Ala Glu Lys Ile Met Asp

180 185 190

Leu Lys Glu Gln Pro Gly Asn Thr Val Ser Ser Gly Gln Glu Asp Phe

195 200 205

Pro Ser Val Leu Phe Glu Thr Ala Ala Ser Leu Pro Ser Leu Ser Pro

210 215 220

Leu Ser Thr Val Ser Phe Lys Glu His Gly Tyr Leu Gly Asn Leu Ser

225 230 235 240

Ala Val Ala Ser Thr Glu Gly Thr Ile Glu Glu Thr Leu Asn Glu Ala

245 250 255

Ser Arg Glu Leu Pro Glu Arg Ala Thr Asn Pro Phe Val Asn Arg Glu

260

265

270

Ser Ala Glu Phe Ser Val Leu Glu Tyr Ser Glu Met Gly Ser Ser Phe

275

280

285

Asn Gly Ser Pro Lys Gly Glu Ser Ala Met Leu Val Glu Asn Thr Lys

290

295

300

Glu Glu Val Ile Val Arg Ser Lys Asp Lys Glu Asp Leu Val Cys Ser

305

310

315

320

Ala Ala Leu His Asn Pro Gln Glu Ser Pro Ala Thr Leu Thr Lys Val

325

330

335

Val Lys Glu Asp Gly Val Met Ser Pro Glu Lys Thr Met Asp Ile Phe

340

345

350

Asn Glu Met Lys Met Ser Val Val Ala Pro Val Arg Glu Glu Tyr Ala

355

360

365

Asp Phe Lys Pro Phe Glu Gln Ala Trp Glu Val Lys Asp Thr Tyr Glu

370

375

380

Gly Ser Arg Asp Val Leu Ala Ala Arg Ala Asn Met Glu Ser Lys Val

385

390

395

400

Asp Lys Lys Cys Phe Glu Asp Ser Leu Glu Gln Lys Gly His Gly Lys

405

410

415

Asp Ser Glu Ser Arg Asn Glu Asn Ala Ser Phe Pro Arg Thr Pro Glu

420

425

430

Leu Val Lys Asp Gly Ser Arg Ala Tyr Ile Thr Cys Asp Ser Phe Ser

435

440

445

Ser Ala Thr Glu Ser Thr Ala Ala Asn Ile Phe Pro Val Leu Glu Asp

450

455

460

His Thr Ser Glu Asn Lys Thr Asp Glu Lys Lys Ile Glu Glu Arg Lys

465

470

475

480

Ala Gln Ile Ile Thr Glu Lys Thr Ser Pro Lys Thr Ser Asn Pro Phe

485

490

495

Leu Val Ala Ile His Asp Ser Glu Ala Asp Tyr Val Thr Thr Asp Asn

500

505

510

Leu Ser Lys Val Thr Glu Ala Val Val Ala Thr Met Pro Glu Gly Leu

515

520

525

Thr Pro Asp Leu Val Gln Glu Ala Cys Glu Ser Glu Leu Asn Glu Ala

530

535

540

Thr Gly Thr Lys Ile Ala Tyr Glu Thr Lys Val Asp Leu Val Gin Thr
545 550 555 560

Ser Glu Ala Ile Gin Glu Ser Ile Tyr Pro Thr Ala Gin Leu Cys Pro
565 570 575

Ser Phe Glu Glu Ala Glu Ala Thr Pro Ser Pro Val Leu Pro Asp Ile
580 585 590

Val Met Glu Ala Pro Leu Asn Ser Leu Leu Pro Ser Thr Gly Ala Ser
595 600 605

Val Ala Gin Pro Ser Ala Ser Pro Leu Glu Val Pro Ser Pro Val Ser
610 615 620

Tyr Asp Gly Ile Lys Leu Glu Pro Glu Asn Pro Pro Pro Tyr Glu Glu
625 630 635 640

Ala Met Ser Val Ala Leu Lys Thr Ser Asp Ser Lys Glu Glu Ile Lys
645 650 655

Glu Pro Glu Ser Phe Asn Ala Ala Ala Gin Glu Ala Glu Ala Pro Tyr
660 665 670

Ile Ser Ile Ala Cys Asp Leu Ile Lys Glu Thr Lys Leu Ser Thr Glu
675 680 685

Pro Ser Pro Glu Phe Ser Asn Tyr Ser Glu Ile Ala Lys Phe Glu Lys
690 695 700

Ser Val Pro Asp His Cys Glu Leu Val Asp Asp Ser Ser Pro Glu Ser
705 710 715 720

Glu Pro Val Asp Leu Phe Ser Asp Asp Ser Ile Pro Glu Val Pro Gln
725 730 735

Thr Gln Glu Glu Ala Val Met Leu Met Lys Glu Ser Leu Thr Glu Val
740 745 750

Ser Glu Thr Val Thr Gln His Lys His Lys Glu Arg Leu Ser Ala Ser
755 760 765

Pro Gln Glu Val Gly Lys Pro Tyr Leu Glu Ser Phe Gln Pro Asn Leu
770 775 780

His Ile Thr Lys Asp Ala Ala Ser Asn Glu Ile Pro Thr Leu Thr Lys
785 790 795 800

Lys Glu Thr Ile Ser Leu Gln Met Glu Glu Phe Asn Thr Ala Ile Tyr
805 810 815

Ser Asn Asp Asp Leu Leu Ser Ser Lys Glu Asp Lys Met Lys Glu Ser
820 825 830

Glu Thr Phe Ser Asp Ser Ser Pro Ile Glu Ile Ile Asp Glu Phe Pro
835 840 845

Thr Phe Val Ser Ala Lys Asp Asp Ser Pro Lys Glu Tyr Thr Asp Leu
850 855 860

Glu Val Ser Asn Lys Ser Glu Ile Ala Asn Val Gin Ser Gly Ala Asn
865 870 875 880

Ser Leu Pro Cys Ser Glu Leu Pro Cys Asp Leu Ser Phe Lys Asn Thr
885 890 895

Tyr Pro Lys Asp Glu Ala His Val Ser Asp Glu Phe Ser Lys Ser Arg
900 905 910

Ser Ser Val Ser Lys Val Pro Leu Leu Leu Pro Asn Val Ser Ala Leu
915 920 925

Glu Ser Gin Ile Glu Met Gly Asn Ile Val Lys Pro Lys Val Leu Thr
930 935 940

Lys Glu Ala Glu Glu Lys Leu Pro Ser Asp Thr Glu Lys Glu Asp Arg
945 950 955 960

Ser Leu Thr Ala Val Leu Ser Ala Glu Leu Asn Lys Thr Ser Val Val
965 970 975

Asp Leu Leu Tyr Trp Arg Asp Ile Lys Lys Thr Gly Val Val Phe Gly
980 985 990

Ala Ser Leu Phe Leu Leu Ser Leu Thr Val Phe Ser Ile Val Ser
995 1000 1005

Val Thr Ala Tyr Ile Ala Leu Ala Leu Leu Ser Val Thr Ile Ser
1010 1015 1020

Phe Arg Ile Tyr Lys Gly Val Ile Gin Ala Ile Gin Lys Ser Asp
1025 1030 1035

Glu Gly His Pro Phe Arg Ala Tyr Leu Glu Ser Glu Val Ala Ile
1040 1045 1050

Ser Glu Glu Leu Val Gin Lys Tyr Ser Asn Ser Ala Leu Gly His
1055 1060 1065

Val Asn Ser Thr Ile Lys Glu Leu Arg Arg Leu Phe Leu Val Asp
1070 1075 1080

Asp Leu Val Asp Ser Leu Lys Phe Ala Val Leu Met Trp Val Phe
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Thr Tyr Val Gly Ala Leu Phe Asn Gly Leu Thr Leu Leu Ile Leu
1100 1105 1110

Ala Leu Ile Ser Leu Phe Ser Ile Pro Val Ile Tyr Glu Arg His
1115 1120 1125

Gln Ala Gln Ile Asp His Tyr Leu Gly Leu Ala Asn Lys Ser Val
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Lys Asp Ala Met Ala Lys Ile Gln Ala Lys Ile Pro Gly Leu Lys
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Arg Lys Ala Glu
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<211> 582

<212> DNA

<213> Homo sapiens

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<213> Homo sapiens

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Gly Lys Thr Cys Leu Leu Ile Val Phe Ser Lys Asp Gln Phe Pro Glu
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Val Tyr Val Pro Thr Val Phe Glu Asn Tyr Val Ala Asp Ile Glu Val
35 40 45

Asp Gly Lys Gln Val Glu Leu Ala Leu Trp Asp Thr Ala Gly Gln Glu
50 55 60

Asp Tyr Asp Arg Leu Arg Pro Leu Ser Tyr Pro Asp Thr Asp Val Ile
65 70 75 80

Leu Met Cys Phe Ser Ile Asp Ser Pro Asp Ser Leu Glu Asn Ile Pro
85 90 95

Glu Lys Trp Thr Pro Glu Val Lys His Phe Cys Pro Asn Val Pro Ile
100 105 110

Ile Leu Val Gly Asn Lys Lys Asp Leu Arg Asn Asp Glu His Thr Arg
115 120 125

Arg Glu Leu Ala Lys Met Lys Gin Glu Pro Val Lys Pro Glu Glu Gly
130 135 140

Arg Asp Met Ala Asn Arg Ile Gly Ala Phe Gly Tyr Met Glu Cys Ser
145 150 155 160

Ala Lys Thr Lys Asp Gly Val Arg Glu Val Phe Glu Met Ala Thr Arg
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Ala Ala Leu Gin Ala Arg Arg Gly Lys Lys Ser Gly Cys Leu Val
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Leu

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<212> DNA
<213> *Mus musculus*

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<212> PRT

<213> Mus musculus

<400> 14

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Cys Asp Ala Leu Met Ala Gly Cys Leu Gln Glu Ala Arg Glu Arg Trp
35 40 45

Asn Phe Asp Phe Val Thr Glu Thr Pro Leu Glu Gly Asn Phe Val Trp
50 55 60

Glu Arg Val Arg Ser Leu Gly Leu Pro Lys Val Tyr Leu Ser Pro Gly
65 70 75 80

Ser Arg Ser Arg Asp Asp Leu Gly Gly Asp Lys Arg Pro Ser Thr Ser
85 90 95

Ser Ala Leu Leu Gln Gly Pro Ala Pro Glu Asp His Val Ala Leu Ser

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Leu Ser Cys Thr Leu Val Ser Glu Arg Pro Glu Asp Ser Pro Gly Gly

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Pro Gly Thr Ser Gln Gly Arg Lys Arg Arg Gln Thr Ser Leu Thr Asp

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Phe Tyr His Ser Lys Arg Arg Leu Val Phe Cys Lys Arg Lys Pro

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<213> Rattus norvegicus

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<211> 425

<212> PRT

<213> *Rattus norvegicus*

<400> 17

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Cys Glu Pro Cys Leu Asp Asn Val Thr Phe Ser Asp Val Val Ser Ala

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Ser Ala Pro Cys Val Glu Ala Asp Asp Ala Val Cys Arg Cys Ala Tyr
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Cys Ser Ile Leu Ala Ala Val Val Val Gly Leu Val Ala Tyr Ile Ala
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Arg Pro Val Asn Gln Thr Pro Pro Pro Glu Gly Glu Lys Leu His Ser
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Val Gly Asp Thr Pro Phe Tyr Ala Asp Ser Leu Val Gly Thr Tyr Ser

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<211> 495

<212> DNA

<213> Homo sapiens

<400> 22

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<210> 23

<211> 164

<212> PRT

<213> Homo sapiens

<400> 23

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Asp Cys Asp Ala Leu Met Ala Gly Cys Ile Gln Glu Ala Arg Glu Arg
35 40 45

Trp Asn Phe Asp Phe Val Thr Glu Thr Pro Leu Glu Gly Asp Phe Ala
50 55 60

Trp Glu Arg Val Arg Gly Leu Gly Leu Pro Lys Leu Tyr Leu Pro Thr
65 70 75 80

Gly Pro Arg Arg Gly Arg Asp Glu Leu Gly Gly Arg Arg Pro Gly
85 90 95

Thr Ser Pro Ala Leu Leu Gln Gly Thr Ala Glu Glu Asp His Val Asp
100 105 110

Leu Ser Leu Ser Cys Thr Leu Val Pro Arg Ser Gly Glu Gln Ala Glu
115 120 125

Gly Ser Pro Gly Gly Pro Gly Asp Ser Gln Gly Arg Lys Arg Arg Gln
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Lys Arg Lys Pro

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<212> PRT

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<400> 24

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<210> 25

<211> 72

<212> PRT

<213> Human adenovirus type 1

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1 5 10 15

Gln Pro Lys Thr Ala Cys Asn Asn Cys Tyr Cys Lys Val Cys Cys Phe

20 25 30

His Cys Gln Val Cys Phe Thr Lys Lys Gly Leu Gly Ile Ser Tyr Gly

35 40 45

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His Gln Ala Pro Leu Pro Lys Gln
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<210> 26

<211> 3305

<212> DNA

<213> *Rattus norvegicus*

<400> 26

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<210> 27
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<212> PRT
<213> *Rattus norvegicus*

<400> 27

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Glu Val Lys Asp His Lys Phe Ile Ala Arg Phe Phe Lys Gln Pro Thr

35

40

45

Phe Cys Ser His Cys Thr Asp Phe Ile Trp Gly Phe Gly Lys Gln Gly

50

55

60

Phe Gln Cys Gln Val Cys Cys Phe Val Val His Lys Arg Cys His Glu

65

70

75

80

Phe Val Thr Phe Ser Cys Pro Gly Ala Asp Lys Gly Pro Asp Thr Asp

85

90

95

Asp Pro Arg Ser Lys His Lys Phe Lys Ile His Thr Tyr Gly Ser Pro

100

105

110

Thr Phe Cys Asp His Cys Gly Ser Leu Leu Tyr Gly Leu Ile His Gln

115

120

125

Gly Met Lys Cys Asp Thr Cys Asp Met Asn Val His Lys Gln Cys Val

130

135

140

Ile Asn Val Pro Ser Leu Cys Gly Met Asp His Thr Glu Lys Arg Gly

145

150

155

160

Arg Ile Tyr Leu Lys Ala Glu Val Thr Asp Glu Lys Leu His Val Thr

165

170

175

Val Arg Asp Ala Lys Asn Leu Ile Pro Met Asp Pro Asn Gly Leu Ser

180

185

190

Asp Pro Tyr Val Lys Leu Lys Leu Ile Pro Asp Pro Lys Asn Glu Ser
195 200 205

Lys Gln Lys Thr Lys Thr Ile Arg Ser Thr Leu Asn Pro Gln Trp Asn
210 215 220

Glu Ser Phe Thr Phe Lys Leu Lys Pro Ser Asp Lys Asp Arg Arg Leu
225 230 235 240

Ser Val Glu Ile Trp Asp Trp Asp Arg Thr Thr Arg Asn Asp Phe Met
245 250 255

Gly Ser Leu Ser Phe Gly Val Ser Glu Leu Met Lys Met Pro Ala Ser
260 265 270

Gly Trp Tyr Lys Leu Leu Asn Gln Glu Glu Gly Glu Tyr Tyr Asn Val
275 280 285

Pro Ile Pro Glu Gly Asp Glu Glu Gly Asn Val Glu Leu Arg Gln Lys
290 295 300

Phe Glu Lys Ala Lys Leu Gly Pro Ala Gly Asn Asn Lys Val Ile Ser Pro
305 310 315 320

Ser Glu Asp Arg Lys Gln Pro Ser Asn Asn Leu Asp Arg Val Lys Leu

325

330

335

Thr Asp Phe Asn Phe Leu Met Val Leu Gly Lys Gly Ser Phe Gly Lys
340 345 350

Val Met Leu Ala Asp Arg Lys Gly Thr Glu Glu Leu Tyr Ala Ile Lys
355 360 365

Ile Leu Lys Lys Asp Val Val Ile Gln Asp Asp Asp Val Glu Cys Thr
370 375 380

Met Val Glu Lys Arg Val Leu Ala Leu Leu Asp Lys Pro Pro Phe Leu
385 390 395 400

Thr Gln Leu His Ser Cys Phe Gln Thr Val Asp Arg Leu Tyr Phe Val
405 410 415

Met Glu Tyr Val Asn Gly Gly Asp Leu Met Tyr His Ile Gln Gln Val
420 425 430

Gly Lys Phe Lys Glu Pro Gln Ala Val Phe Tyr Ala Ala Glu Ile Ser
435 440 445

Ile Gly Leu Phe Phe Leu His Lys Arg Gly Ile Ile Tyr Arg Asp Leu
450 455 460

Lys Leu Asp Asn Val Met Leu Asp Ser Glu Gly His Ile Lys Ile Ala

465

470

475

480

Asp Phe Gly Met Cys Lys Glu His Met Met Asp Gly Val Thr Thr Arg
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Thr Phe Cys Gly Thr Pro Asp Tyr Ile Ala Pro Glu Ile Ile Ala Tyr
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Gln Pro Tyr Gly Lys Ser Val Asp Trp Trp Ala Tyr Gly Val Leu Leu
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Tyr Glu Met Leu Ala Gly Gln Pro Pro Phe Asp Gly Glu Asp Glu Asp
530 535 540

Glu Leu Phe Gln Ser Ile Met Glu His Asn Val Ser Tyr Pro Lys Ser
545 550 555 560

Leu Ser Lys Glu Ala Val Ser Ile Cys Lys Gly Leu Met Thr Lys His
565 570 575

Pro Ala Lys Arg Leu Gly Cys Gly Pro Glu Gly Glu Arg Asp Val Arg
580 585 590

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595 600 605

Glu Ile Gln Pro Pro Phe Lys Pro Lys Val Cys Gly Lys Gly Ala Glu

610

615

620

Asn Phe Asp Lys Phe Phe Thr Arg Gly Gln Pro Val Leu Thr Pro Pro
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645 650 655

Ser Tyr Val Asn Pro Gln Phe Val His Pro Ile Leu Gln Ser Ala Val
660 665 670